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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,362	11/11/2003	Mihir C. Desai	58970 (49366)	4628
21874	7590	12/13/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			HAMO, PATRICK	
			ART UNIT	PAPER NUMBER

3746

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/705,362	Applicant(s) DESAI ET AL.	
	Examiner Patrick Hamo	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>02 April 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: on line 6 of the claim, "third means" is believed to be in error for --first means--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "a second line". There is insufficient antecedent basis for this limitation in the claim. "A second line" implies "a first line", which had not been positively recited. For purposes of examination, the Office interprets the claimed limitation "a second line" as "a line".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-3, 5-14, and 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Maker et al., 6,412,271.

Maker discloses a fuel control system comprising a metering valve 42 in fluid communication with a vane pump 28; a pressure drop and spill valve 43 receiving a portion of the pump output C at a first pressure, and outputting out a lower pressure, which is inherently the average of the first pressure and a low reference pressure; and an actuator 26 in the form of a servo device with a piston 27 receiving the valve output via a line from the spill valve (see fig. 5) to set the displacement of the vane pump, thereby determining its output (cols. 2-5), the servo device receiving a second pressure to oppose the first pressure (see fig. 5), the two pressures inherently approximate to each other at steady state operation, a first line connected from the metering output to the spill valve (see fig. 5), the piston connected to a cam ring or housing 29 via connecting rod 32, a fuel line connected between the output of the vane pump and the servo valve to supply a pressure opposed to the first pressure that is also connected to the lower pressure of the spill valve output via an orifice at the valve (see fig. 5). The method of operation disclosed includes a vane pump 28 receiving fuel at a relatively low pressure and outputting at an elevated pressure, metering the output with metering valve 42, creating a spill return flow to spill valve 43 to allow for quick response when additional fuel is required by the engine (col. 1, ll. 33-37) and to regulate a pressure differential across the metering valve (col. 1, ll. 8-11), also supplying a pressure to oppose a first pressure of the servo valve (see fig. 5), and adjusting the displacement of the vane pump using the servo valve (col. 4, ll. 10-11), the setting determined by the

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pressure supplied by the spill valve, and dampening a response of the spill valve by inputting the output of the metering valve to the spill valve (see fig. 5):

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maker et al., i.v. Dyer, 5,896,737.

Maker discloses all the limitations substantially as claimed except for the following taught by Dyer: a fuel filter 148 situated at the outlet of fuel pump 118 for filtering impurities from the fuel (col. 3, ll. 11-13).

Therefore, it would have been obvious to combine Maker with Dyer in order to make the fuel relatively free of impurities (col. 3, ll. 11-13).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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EHUD GARTENBERG
SUPERVISORY PATENT EXAMINER